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*Aerospace Medicine*

**EXPOSURE CONTROL FOR BLOODBORNE  
PATHOGENS**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This instruction implements AFD 48-1, *Aerospace Medical Program*. It recognizes that employees of this base may encounter routine or non-routine occupational exposure to bloodborne pathogens including hepatitis B virus (HBV) and human immunodeficiency virus (HIV). This instruction has been developed in conjunction with the Military Public Health Services to eliminate or minimize employee exposure to blood or other potentially infectious materials and is intended to comply with the requirements of OSHA Standard 29 CFR 1910.1030, *Occupational Exposure to Bloodborne Pathogens*. It applies to all personnel assigned or attached to Westover.

**SUMMARY OF REVISIONS**

This revision establishes methods of compliance (paragraph 1.); changes work practice controls (paragraph 1.4.); establishes sharps injury log procedures (paragraph 1.5.); includes additional units with potential exposure to pathogens (Table 1.); defines needle less systems (Terms); defines sharps with engineered sharps injury protections (Terms); defines sharps injury log (Terms); and includes occupational exposure to bloodborne pathogens post exposure evaluation and follow up for reserve personnel (Attachment 3). A bar ( | ) indicates revisions from the previous edition.

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## 1. Methods of Compliance.

1.1. The Exposure Control Plan shall be reviewed and updated at least annually and whenever necessary to reflect new or modified tasks and procedures which affect occupational exposure and to reflect new or revised employee positions with occupational exposure. The review and update of such plans shall also reflect changes in technology that eliminate or reduce exposure to bloodborne pathogens and annually document consideration and implementation of appropriate commercially available and effective safer medical devices designed to eliminate or minimize occupational exposure.

1.2. An employer, who is required to establish an Exposure Control Plan, shall solicit input from non-managerial employees responsible for direct patient care who are potentially exposed to injuries from contaminated sharps in the identification, evaluation, and selection of effective engineering and work practice controls and shall document the solicitation in the Exposure Control Plan.

1.3. **Standard Precautions** . Standard precautions shall be observed to prevent contact with blood or other potentially infectious materials. According to the concept of standard precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens. Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids shall be considered potentially infectious materials. Supervisors of employees working in job classifications who encounter occupational exposure to blood or other potentially infectious materials are responsible for ensuring that employees observe standard precautions at all times.

1.4. **Engineering and Work Practice Controls** . Controls (e.g., sharps disposal containers, self-sheathing needles, safer medical devices, such as sharps with engineered sharps injury protections and needleless systems) that isolate or remove the bloodborne pathogens hazard from the workplace.

1.4.1. Employees must wash their hands and any other exposed skin with soap and water, or flush mucous membranes with water immediately or as soon as feasible following contact of such body areas with blood or other potentially infectious materials.

1.4.2. Employees must wash their hands and any other exposed skin immediately or as soon as possible after removal of gloves or other personal protective equipment.

1.4.3. Employees are required to wash their hands and any other exposed skin with soap and water as soon as feasible after using an appropriate antiseptic. Hand cleaners or towelettes are acceptable only where hand-washing facilities are not feasible.

1.4.4. Contaminated needles and other sharps shall not be bent, recapped, or removed unless no alternative is feasible or such action is required by a specific medical procedure. Such recapping or needle removal must be accomplished through the use of a mechanical device or a one-handed technique. Shearing or breaking of contaminated needles is prohibited.

1.4.5. Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in work areas where there is a reasonable likelihood of occupational exposure.

1.4.6. Food and drink shall not be kept in refrigerators, freezers, shelves, cabinets or on counter-tops or bench tops where blood or other potentially infectious materials are present.

1.4.7. All procedures involving blood or other potentially infectious materials shall be performed in such a manner as to minimize splashing, spraying, splattering, and generation of droplets of these substances.

1.4.8. Mouth pipetting/suctioning of blood or other potentially infectious materials is prohibited.

1.4.9. Specimens of blood or other potentially infectious materials shall be placed in a container, which prevents leakage during collection, handling, processing, storage, transport, or shipping.

1.4.10. Equipment that may become contaminated with blood or other potentially infectious materials shall be examined prior to servicing or shipping and decontaminated, as necessary. If decontamination is not feasible, a readily observable label, in accordance with 29 CFR 1910.1030, must be attached to the equipment stating which portions remain contaminated. The Infection Control Officer within each unit is responsible for informing affected employees, the servicing representative, and/or the manufacturer prior to handling, servicing, or shipping so that appropriate precautions can be taken.

## **1.5. Sharps Injury Log.**

1.5.1. Each unit shall establish and maintain a sharps injury log for the recording of percutaneous injuries from contaminated sharps. The information in the sharps injury log shall be recorded and maintained in such a manner as to protect the confidentiality of the injured employee. The sharps injury log shall contain, at a minimum:

1.5.1.1. The type and brand of device involved in the incident, the department or work area where the exposure incident occurred, and an explanation of how the incident occurred.

1.5.2. The sharps injury log shall be maintained for the period required by 29 CFR 1904.6.

**2. Personal Protective Equipment.** Where the risk of occupational exposure remains after institution of engineering and work practice controls, appropriate personal protective equipment will be used. Personal protective equipment will be considered "appropriate" only if it does not permit blood or other potentially infectious materials to pass through to reach employees work clothes, street clothes, undergarments, skin, eyes, mouth, or other mucous membranes under normal conditions of use. Personal protective equipment is provided at no cost to the employee. Supervisors will be responsible for ensuring that employees wear appropriate personal protective equipment. It is recommended that a First Aid Kit, NSN 6545006561093, be placed in each work area identified in [Table 1.](#), Exposure Determination. This kit can be ordered through the base supply system, or you may use the IMPAC card to purchase a comparable kit from any local medical equipment distributor. The following also applies to personal protective equipment.

**Table 1. – Exposure Determination.**

<b>Exposure Determination</b>				
<p><b>NOTE:</b> Exposure determination has been made without regard to the use of personal protective equipment. The following are job classifications in which employees have potential exposure to bloodborne pathogens.</p>				
<b>UNIT</b>	<b>WHO</b>	<b>HBV</b>	<b>RATIONALE</b>	<b>Task #</b>
Fire Department (439 MSG/CEF)	Fire Fighters	Offered	Emergency response, confined space rescue	2 & 4-14
Civil Engineering Squadron (439 CES/CEF)	Fire Fighters	Required	Emergency response	2 & 4-14
Aerospace Medicine Squadron (439 AMDS)	All reservists	Required	Reserve medical	1-13
Aeromedical Staging Squadron (439 ASTS)	All reservists	Required	Reserve medical	1-13
Aeromedical Evacuation Squadron (439 AES)	All reservists	Required	Reserve medical	1-13
722 ASTS	All reservists	Required	Reserve medical	1-13
Security Forces Squadron (439 SFS)	Security Police Officers All Reservists	Offered (civilians) Required	Emergency response, vehicle searches, uncooperative individual	6, 13
Lodging (439 MSG/SVML)	Housekeeping	Offered	Materials in billeting rooms contaminated with body fluid	13
Fitness Center (439 MSG/SVMR)	Recreation Aids	Offered	Cleanup blood and blood products following injury Lifeguards – CPR, first aid	11, 13 7,8,11, 12,13
Airfield Communications Maintenance	Airfield Maintenance Technicians	Offered	CPR/First responder requirements due to work on energized equipment	7,8,12
439CES/EOD	All Reservists	Required	First Responder/CPR in blast or potential blast site	7,8,12
439 SVS	All Reservists	Required	Materials in billeting rooms contaminated with blood Cleanup blood and blood products following injury	11, 13

2.1. Personal protective equipment must be cleaned, laundered, repaired, and/or replaced as needed to maintain its effectiveness.

2.2. If blood or other potentially infectious material penetrates a garment, this garment must be removed immediately or as soon as feasible.

2.3. All personal protective equipment must be removed prior to leaving the work area.

2.4. When personal protective equipment is removed, it must be placed in an appropriately designated covered container for storage, washing and decontamination, or disposal.

**Table 2. – Tasks with Recommended Personnel Protective Equipment.**

<b>Tasks with Recommended Personnel Protective Equipment</b>					
#	Task	Gloves	Eye Protection	Masks	Gown
1	Drawing blood	Yes	No	No	No
2	Starting IV	Yes	No	No	No
3	Giving injection	Yes	No	No	No
4	Blood pressure	No	No	No	No
5	Temperature	No	No	No	No
6	Direct patient contact	Yes	No	No	No
7	Bleeding control with minimal bleeding	Yes	No	No	No
8	Bleeding control with spurting blood	Yes	Yes	Yes	Yes
9	Suctioning	Yes	No, unless splashing	No, unless splashing	No
10	Childbirth	Yes	Yes	Yes	Yes
11	Disinfecting Contaminated Equipment	Yes	Yes	No	Yes
12	Administering CPR	Yes	No	Mouth to mouth mask with one way valve	No
13	Contact with contaminated equipment	Yes	No	No	No
14	Utilize AED (Automatic External Defibrillator)	Yes	No	No	No

**3. Housekeeping.** In keeping with the concept of Standard Precautions, supervisors will ensure that the worksite is maintained in a clean and sanitary condition.

3.1. Equipment. All contaminated equipment and environmental work surfaces shall be cleaned and decontaminated with an appropriate disinfectant after contact with blood or other potentially infectious materials by shift personnel.

3.2. Work Surfaces. Contaminated work surfaces shall be decontaminated with an appropriate disinfectant after completion of procedures or as soon as feasible when surfaces are obviously contaminated, after any spill of blood or other potentially infectious material, and at the end of the work shift.

3.3. Protective Coverings. Protective coverings such as plastic wrap, aluminum foil, or imperviously-backed absorbent paper used to cover equipment or environmental surfaces shall be removed and replaced as soon as feasible when they become obviously contaminated.

3.4. Trash Cans. All bins, pails, cans, and similar receptacles which have a reasonable likelihood for becoming contaminated with blood or other potentially infectious materials will be inspected, cleaned, and decontaminated as soon as feasible upon visible contamination.

3.5. Sharps. Contaminated sharps shall be discarded immediately or as soon as feasible in approved containers. *Caution:* Broken glassware that may be contaminated shall not be picked up directly with the hands. It must be cleaned up using mechanical means such as a brush and dustpan, tongs, or forceps. (Furthermore, any mechanical device, which is contaminated, must be decontaminated following use or as soon as feasible).

3.6. Sharps Containers. Sharps containers will be inspected to ensure they do not become overfilled. Sharps containers must be closeable, puncture resistant, leak proof on sides and bottom, and labeled or color-coded in accordance with paragraph (g)(1)(i) of 29CFR 1910.1030. Additionally, sharps containers will be located as close as feasible to the immediate area where sharps are used.

3.7. Laundry. Contaminated laundry must be bagged or containerized at the location where it was used in an approved bag or container (see labeling requirements). Contaminated laundry must not be sorted or rinsed in the location of use. Through the use of the IMPAC card, contaminated laundry will be given to a laundry cleaning company, with instructions to ensure disinfection. Services may clean their own laundry as follows:

3.7.1. Laundry/towels must be placed in approved bag.

3.7.2. At the end of the duty day, and no greater than 24 hours, contaminated laundry shall be washed separately from all other laundry. When removing laundry from bag or container, disposable gloves shall be worn. Gloves shall be disposed of in general waste receptacle.

3.7.3. Laundry shall be washed using any commercially available detergent and one cup of chlorine bleach per load of laundry.

3.8. Disposal. All contaminated waste, properly bagged and labeled, will be given to the 439 AMDS within 24 hours of being generated. The only organizations that would routinely generate "potentially infectious material" are the 439 AMDS, 439 MSG/CEF, 439 AES, 439 ASTS, SVML and SVMR.

#### **4. Hepatitis B Vaccination and Post-Exposure Evaluation/Follow Up.**

4.1. The Hepatitis B vaccine and vaccination series shall be made available at no cost to all employees identified in [Table 1](#). The remainder of the identified employees, upon exposure, will be evaluated by a medical doctor within one hour, who will make the decision for treatment and follow-up at no cost to the employee. 439 AMDS will provide the HBV to all required reservists. Civilians with occu-

pational exposure will receive the vaccine either from the 439 AMDS or from the assigned contract medical facility. At the employees' request, the Hepatitis B titre will be made available to the employee upon completion of the vaccination series.

4.2. These employees are allowed the chance to receive the Hepatitis B vaccination after the employee has received the required training and within 10 working days of initial assignments. Employees who decline the Hepatitis B vaccination will be required to sign 439 AW Form 12, **Informed Consent for Westover ARB Employees Hepatitis B Vaccine**. (All reservists with potential exposure must receive the vaccine.) If a civilian employee initially declines the Hepatitis B vaccine but later decides to accept, AMDS will make the Hepatitis B vaccine available at that time, assuming the employee still has occupational exposure.

**5. Post Exposure Evaluation/Follow-Up.** Due to the potentially severe consequences resulting in exposure incidents, the circumstances regarding these incidents will be investigated with the utmost priority. Employees must notify their supervisor immediately. The supervisor and employee complete 439 AW Form 5, **Exposure Incident Statement**. The supervisor will send the individual to be seen in the emergency room at Baystate Medical Center. The supervisor then notifies Bioenvironmental Engineering Services (SGPB). If it is after normal duty hours, the supervisor must notify SGPB the next duty day. If an exposure incident has occurred, SEG will be informed for proper documentation in the OSHA 300 log. The medical evaluation and follow-up will include the following elements (within 24 hours):

5.1. Evaluation and documentation by a medical doctor of the route(s) of exposure and the circumstances under which the exposure incident occurred. This should occur within one hour of exposure. All civilians complete CA-16, **Authorization For Medical Treatment**. Civilians are covered under the provisions of Workman's Compensation. For exposed reservists, contact the 439 AMDS, (413) 557-3565 or DSN 589-3565 for completion of line of duty paperwork.

5.2. Identification and documentation of the source individual, unless infeasible or prohibited by state or local law. If consent is obtained (where required), the source individual's blood shall be tested and the results documented. If the source individual is known to be infected with HIV or HBV, this shall be documented without a repeat test.

5.3. Results of the source individual's testing shall be made available to the exposed employee, along with applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.

5.4. The exposed employee's blood shall be tested as soon as feasible after consent is obtained.

5.5. If the employee consents to baseline blood collection but does not give consent at the time for HIV serologic testing, the sample shall be preserved for 90 days. If, within 90 days of the exposure incident, the employee elects to have the baseline sample tested, such testing shall be done as soon as feasible.

5.6. When medically indicated, post-exposure prophylaxis will be provided, as recommended by the U.S. Public Health Service.

5.7. Counseling will be made available to the employee upon request.

5.8. Evaluation of reported illnesses.



5.8.1. Within 15 days of completion, a copy of the evaluating healthcare professional's written opinion shall be obtained and provided to the employee. This written opinion will be limited to the following information:

5.8.1.1. That the employee has been informed of the results of the evaluation.

5.8.1.2. That the employee has been told about any medical conditions resulting from exposure to blood or other potentially infectious materials which require further evaluation or treatment (other findings or diagnoses shall remain confidential and not be included in the written report).

5.8.2. SGPB is responsible for providing the following information to the healthcare professional following an exposure incident:

5.8.2.1. A copy of the 439 AW Exposure Control Plan.

5.8.2.2. A description of the exposed employee's duties as they relate to the exposure incident.

5.8.2.3. Documentation of the route(s) of exposure and circumstances under which exposure occurred.

5.8.2.4. All medical records relevant to the appropriate treatment of the employee including vaccination status.

## **6. Labeling.**

6.1. Warning labels shall be affixed to containers of regulated waste, refrigerators and freezers containing blood or other potentially infectious materials, and other containers used to store, transport, or ship blood or other potentially infectious materials. These labels shall include the following legend: "BIOHAZARD" (word and symbol).

6.2. These signs shall be fluorescent orange or orange-red or predominantly so, with lettering or symbols in contrasting color. Alternately, red bags or containers may be substituted for labels.

**7. Training.** All employees with potential for occupational exposure will be expected to participate in a training session that will be provided at the time of initial assignment to tasks where potential occupational exposure takes place, every year thereafter, and whenever changes such as modifications of tasks or procedures or institution of new tasks or procedures affect the employee's exposure. SGPB will either provide training to all units or train a trainer, except medical and firefighters, who conduct their own. All training will be coordinated through SGPB and be documented. All documentation will be maintained by the unit with a copy sent to SGPB for filing. Training will consist of the following:

7.1. An explanation of the Bloodborne Pathogens Standard (29CFR 1910.1030) and the fact that a copy of the text of this standard will be accessible to employees at all times.

7.2. A general explanation of the epidemiology and symptoms of bloodborne diseases.

7.3. An explanation of the modes of transmission of bloodborne pathogens.

7.4. An explanation of the exposure control plan and the means by which employees can obtain a copy of the written plan.

7.5. An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials.

- 7.6. An explanation of the use and limitations of methods that will prevent or reduce exposure, to include engineering controls, work practice, and personal protective equipment.
- 7.7. Information on the types, proper use, location, removal, handling, decontamination, and disposal of personal protective equipment.
- 7.8. An explanation of the basis for selection of personal protective equipment.
- 7.9. Information on the hepatitis B vaccine and a statement that the vaccine will be offered free of charge to those identified.
- 7.10. Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials.
- 7.11. An explanation of the procedures to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available.
- 7.12. Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident.
- 7.13. An explanation of the signs and labels and/or color coding that is used in the facility.
- 7.14. An opportunity for interactive questions and answers with the person conducting the training session.
- 7.15. The organization will keep a record of the training on file and send a copy to SGPB concerning all training sessions. This documentation will include unit, trainer, trainer's qualifications, trainee, job title, SSN (last four), date of training, and information covered.

**8. Recordkeeping.** Medical records must be kept for each employee with occupational exposure to bloodborne pathogens. Civilian and reserve medical records will be maintained in accordance with established procedures. In addition, a SGPB log will be kept for all exposures. These records will be kept in accordance with the privacy act. The following records will be kept on file:

- 8.1. A file for each employee with occupational exposure to blood or other potentially infectious materials including the name and social security number of the employee, a copy of the employee's hepatitis-B vaccination status (maintained in ASIMS Occupational Health database and also in the individuals medical record).
- 8.2. A copy of all results of examinations, medical testing, and follow-up procedures following an exposure incident (to be maintained in medical record).
- 8.3. The employer's copy of the healthcare professional's written opinion regarding post-exposure evaluation and follow-up (to be maintained in medical record).
- 8.4. Hepatitis B declination statement of civilian workers will be filed in medical records and tracked in the ASIMS database.

**NOTE:** The above records will not be disclosed or reported without the employee's express written consent to any person within or outside the workplace except as required by the bloodborne pathogens standard or by law. Additionally, these records will be maintained for at least the duration of employment plus thirty years.

- 9.** Forms Prescribed. 439 AW Form 5 and 439 AW Form 12.

WALLACE W. FARRIS, JR., Colonel, USAFR  
Commander

## Attachment 1

### GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

#### *Terms*

**Blood**—Human blood, human blood components, and products made from human blood.

**Bloodborne Pathogens**—Pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).

**Contaminated**—The presence or the reasonably anticipated presence of blood or other potentially infectious material on an item or surface.

**Contaminated Laundry**—Laundry, which has been soiled with blood or other potentially infectious materials or may contain sharps.

**Contaminated Sharps**—Any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes and exposed ends of dental wires.

**Decontamination**—The use of physical or chemical means to remove, inactivate, or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious articles and the surface or item is rendered safe for handling, use or disposal.

**Engineering Controls**—Controls (e.g., sharps disposal containers, self-sheathing needles, safer medical devices, such as sharps with engineered sharps injury protections and needleless systems) that isolate or remove the bloodborne pathogens hazard from the workplace.

**Exposure Incident**—A specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

**Needleless Systems**—A device that does not use needles for: the collection of bodily fluids or withdrawal of body fluids after initial venous or arterial access is established; the administration of medication or fluids; or any other procedure involving the potential for occupational exposure to bloodborne pathogens due to percutaneous injuries from contaminated sharps.

**Occupational Exposure**—Reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

**Other Potentially Infectious Materials**—(1) The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids; (2) Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and (3) HIV-containing cell or tissue cultures, organ cultures, and HIV or HBV-containing culture medium or other solutions; and blood, organs, or other tissue from experimental animals infected with HIV or HBV.

**Parenteral**—Piercing mucous membranes or the skin barrier through such events as needlestick, human bites, cuts, and abrasions.

**Personal Protective Equipment**—Specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g. uniforms, pants, shirts, or blouses) not intended to function as protection against a hazard is not considered to be personal protective equipment.

**Regulated Waste**—Liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials.

**Sharps with Engineered Sharps Injury Protections**—A non-needle sharp or a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with a built-in safety feature or mechanism that effectively reduces the risk of an exposure incident.

**Sharps Injury Log** —Maintained for the recording of percutaneous injuries from contaminated sharps.

**Standard Precautions**—An approach to infection control. According to the concept of Standard Precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.

**Work Practice Controls**—Controls that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g. prohibiting recapping of needles by a two handed technique).

## Attachment 2

### METHODS OF DECONTAMINATION TO BE USED

#### A2.1. STERILIZATION: Allows for no microbial life to exist.

A2.1.1. Destroys: All forms of microbial life including high numbers of bacterial spores.

A2.1.2. Methods: Steam under pressure (autoclave), gas (ethylene oxide), dry heat or immersion in EPA-approved chemical “sterilant: for prolonged period of time; e.g., 10 hours or according to manufacturers’ instructions. **NOTE:** Liquid chemical “sterilants” should be used only on those instruments that are impossible to sterilize or disinfect with heat.

A2.1.3. Use: For those instruments or devices that penetrate skin or contact normally sterile areas of the body; e.g., scalpels, needles, etc. Disposable invasive equipment eliminates the need to process these types.

#### A2.2. INTERMEDIATE LEVEL DISINFECTION:

A2.2.1. Destroys: Mycobacterium tuberculosis, vegetative bacteria, most viruses, and most fungi, but does not kill bacterial spores.

A2.2.2. Methods: EPA-registered “hospital disinfectant” chemical germicides that have a label claim for tuberculocidal activity; commercially available hard surface. Germicides or solutions containing at least 500 ppm (parts per million) free available chlorine (a 1:100 dilution of common household bleach - approximately 1/4 cup bleach per gallon of tap water)

A2.2.3. Use: For those surfaces that come into contact only with intact skin, e.g., stethoscopes, blood pressure cuffs, splints, etc. Clean visible material from surface before applying disinfectant.

#### A2.3. LOWER LEVEL DISINFECTION:

A2.3.1. Destroys: Most bacteria, some viruses, some fungi, but not Mycobacterium tuberculosis or bacterial spores.

A2.3.2. Methods: EPA-registered “hospital disinfectants” (no label claim for tuberculodial activity)

A2.3.3. Use: These agents are excellent cleaners and can be used for routine housekeeping or removal of soiling in the absence of visible blood contamination.

#### A2.4. ENVIRONMENTAL DISINFECTION:

A2.4.1. Environmental surfaces which have become soiled should be cleaned and disinfected using any cleaner or disinfectant agent which is intended for environmental use. Such surfaces include floors, woodwork, ambulance seats, counter tops.

A2.4.2. Important: To assure the effectiveness of any sterilization or disinfection process, equipment and instruments must first be thoroughly cleaned of all visible debris.

A2.4.3. Minimizing Risk During CPR Training

A2.4.4. Instructors shall follow the manufacturer's recommendations and provisions for cleaning and disinfecting the mannequin.

A2.4.5. Instructors and/or students shall not actively participate in hands-on training with the mannequins if:

A2.4.5.1. They have open lesions on their hands in their mouth or on/around their lips

A2.4.5.2. They are known to be seropositive for hepatitis B surface antigens

A2.4.5.3. They have upper respiratory infections; if they have had a positive HIV test or

A2.4.5.4. The student or instructor believes he or she has been exposed to or is in the active stage of any infectious process.

A2.4.6. Students shall be told in advance that the training sessions will involve close physical contact with their fellow students.

A2.4.7. If more than one CPR mannequin is available, students shall be assigned in pairs, so each pair has contact with only one mannequin. This approach would lessen the possible contamination of several mannequins by one individual and limit possible exposure to other class members.

A2.4.8. All persons responsible for CPR training shall be thoroughly familiar with hygiene concepts (e.g. thorough hand washing prior to mannequin contact and not eating during class to avoid contaminating mannequins with food particles) as well as the procedures for cleaning and maintaining mannequins and accessories (e.g., face shields). Mannequins shall be inspected routinely for signs of physical deterioration, such as cracks or tears in plastic surfaces, which makes thorough cleaning difficult, if not impossible. Mannequin clothes and hair shall be washed when visibly soiled.

A2.4.9. During the two-rescuer CPR training and practical, there is no opportunity to disinfect the mannequin when the students switch positions. To limit potential for disease transmission, the student taking over ventilation shall simulate instead of blowing into the mannequin. This recommendation is consistent with current training recommendations of the American Red Cross and the American Heart Association.

A2.4.10. Training for the obstructed airway procedure involves the student using their finger to sweep foreign matter out of the mannequins' mouth. This action could contaminate the student's finger with exhaled moisture and saliva from a previous student's exhalation or contaminate the mannequin with material from the student's finger. When performing this procedure, the finger sweep should either be simulated or performed on a mannequin whose airway has been decontaminated before the procedure and will be decontaminated after the procedure.

A2.4.11. Personnel decontaminating the mannequins shall wear gloves and wash their hands after finishing. At the end of each class, the following procedures shall be done as soon as possible to avoid fluids drying:

A2.4.11.1. Disassemble the mannequin as directed by manufacturer.

A2.4.11.2. Thoroughly wash all external and internal surfaces and reusable protective face shields with warm soapy water and brushes.

A2.4.11.3. Rinse all surfaces with fresh water.

A2.4.11.4. Saturate all surfaces with a sodium hypochlorite solution (one-quarter cup of liquid household bleach per gallon of tap water) for 10 minutes. This solution must be made fresh at each class and discarded after.

A2.4.11.5. After 10 minutes, rinse with fresh water and dry all external and internal surfaces using a 4 x 4 and alcohol to displace water and promote quicker drying. Quick drying minimizes the growth of bacterial or fungal pathogens.

A2.4.12. Each time a different student uses the mannequin in a training class, the individual protective face shield, if used, should be changed. Between students or after the instructor demonstrates a procedure, such as cleaning an obstructed airway, the face and inside of the mouth of the mannequin should be wiped vigorously with clean, absorbent material (e.g., 4 inch by 4 inch gauze pad), wet with either the hypochlorite solution described above, or with 70 percent alcohol (isopropanol or ethanol). The surfaces should remain wet for at least 30 seconds before they are wiped dry with a second piece of clean, absorbent material. **NOTE:** Although highly bactericidal, alcohol is not considered to be a broad-spectrum disinfection agent, so the use of alcohol here is recommended primarily as an aid in mechanical cleaning and drying.

A2.4.13. People responsible for the use and maintenance of CPR mannequins shall not rely totally on the mere presence of a disinfectant to protect them and their students from cross-contamination during training programs. Emphasis shall be placed on the necessity of thorough physical cleaning (scrubbing, wiping) as the first step in an effective decontamination protocol. Microbial contamination is easily removed from smooth, nonporous surfaces by using disposable cleaning cloths moistened with a detergent solution. There is no evidence that a soaking procedure alone with a liquid is as effective as the same procedure accompanied by vigorous scrubbing.

A2.4.14. Policy for minimizing risk of transmission of infectious diseases during actual CPR: No transmission of hepatitis B virus during mouth-to-mouth resuscitation has been documented; however, because of the theoretical risk of salivary transmission of HIV during mouth-to-mouth resuscitation, special attention should be given to the use of disposable airway equipment or resuscitation bags and the wearing of gloves when in contact with blood or other body fluids. Resuscitation equipment and devices known or suspected to be contaminated with blood or other body fluids should be used once and disposed of or be thoroughly cleaned and disinfected after each use. Clear plastic facemasks with one-way valves are available for use during mouth-to-mouth resuscitation. These masks provide diversion of the victim's exhaled gas away from the rescuer and may be used by these health-care providers and public safety personnel properly trained in their use during two-person rescue, in place of mouth-to-mouth resuscitation. The need for and effectiveness of this adjunct in preventing transmission of an infectious disease during mouth-to-mouth resuscitation are unknown. If this type of device is to be used as reassurance to the rescuer that a potential risk might be minimized, the rescuer must be adequately trained in its use, especially with respect to making an adequate seal on the face and maintaining a patent airway.

A2.4.15. Such a device requires two hands to secure a proper face seal and to maintain an open airway. As an additional precaution, the rescuer may elect to wear latex or vinyl gloves because saliva or blood on the victim's mouth or face may be transferred to the rescuer's hands.



**Table A2.1. – Required CPR Training.**

<b>Required CPR Training</b>	
<b>NOTE:</b> The following job classifications require training in CPR, however they are not required to perform CPR in their job, therefore they are not required to fall under the requirements of this instruction. The CEF will respond to all emergencies for these units when on Westover ARB. “Awareness level” training is provided during CPR initial and refresher training.	
<b>UNIT</b>	<b>WHO</b>
439 CES	welders, electricians
439 AMXS/LGM	all reservists, except admin
439 Communications Squadron	all reservists, except admin
439 ALCF	com techs, age spec

**Attachment 3****OCCUPATIONAL EXPOSURE TO BLOODBORNE PATHOGENS  
POST EXPOSURE EVALUATION AND FOLLOW UP FOR RESERVE PERSONNEL**

Following an exposure incident resulting in a percutaneous injury from contaminated sharps, the following procedures are to be followed.

**A3.1.** Immediately cleanse wound and notify supervisor and/or your unit Infection Control Officer, who will notify SGPB at extension 2663 on the day of incident. If after hours, report the incident the following morning.

**A3.2.** With supervisor, complete 439 AW Form 5 including source individual's name.

**A3.3.** Obtain consent from source individual for testing for HIV, HBV and HCV (consent form attached). If source is already known to be positive, no further testing is indicated. Report to SGPB with completed paperwork.

**A3.4.** Supervisor or SGPB personnel will direct individual to Baystate Medical Center (or other local hospital emergency room) for evaluation and documentation of the incident by a medical doctor. The medical evaluation and follow-up shall be completed within 24 hours.

**A3.5.** If consent is obtained, the source individual's blood shall be tested ASAP. Results of the source individual's testing shall be made available to you.

**A3.6.** The exposed individual's blood shall also be tested as soon as feasible after consent is obtained. If you do not wish to be tested for HIV, HBV and HCV, the sample will be preserved for 90 days following the incident, in the event you change your mind.

**A3.7.** When medically indicated, post exposure prophylaxis will be provided as recommended by the US Public Health Service. Counseling will be made available to you upon request.

**A3.8.** Within 15 days of completion, a copy of the evaluating healthcare provider's written opinion will be provided to you and will include documentation that you have been notified, information regarding any medical conditions which may result from the exposure which could require further evaluation or treatment.

**A3.9.** SGPB will provide the healthcare professional following the exposure incident with a copy of the 439 AW Exposure Control Plan and a copy of the Exposure Incident Statement, 439 AW Form 5 and other pertinent medical record information, including vaccination status.

**A3.10.** Contact the 439 AMDS at (413) 557-1565 or DSN 589-3565 for completion of line of duty paperwork.

## Attachment 4

## SAMPLE OF UNPROTECTED EXPOSURE FORM



**MASSACHUSETTS  
DEPARTMENT OF PUBLIC HEALTH  
UNPROTECTED EXPOSURE FORM**

(Please print or type)

Today's Date 0 / 3 / 0 / 7 / 1 / 0	Incident Date 0 / 3 / 0 / 7 / 1 / 0	Receiving Facility Baystate Medical Center
Transporting Ambulance Service AMR	Ambulance Trip Report # A000001	
Address Springfield, MA	Designated Infection Control Officer (DICO) Major Margaret Houlihan	
Telephone # for DICO 413-557-5555	It is recommended the prehospital emergency care agencies <i>type or print</i> in the name <i>and telephone number</i> of the current DICO before <i>blank</i> forms are provided to their personnel.	

Patient Information		Rescuer Information	
Name SSgt Rocky Balboa		Name TSgt Harry Callahan	
Incident Location Shoppette Parking Lot		Address Westover ARB	
Incident Type <input checked="" type="checkbox"/> Medical <input type="checkbox"/> Trauma		City/State/Zip Chicopee, Ma 01022	
Transportation <input checked="" type="checkbox"/> Emergency <input type="checkbox"/> Routine		Day Phone 413-557-XXXX	Evening Phone 413-XXX-XXXX
Check box(es) which best indicate your exposure. <i>Explain in detail in the spaces provided below.</i>	Profession Law Enforcement	Department/ <i>Employer</i> Security Forces	
	Exposure Route: <input type="checkbox"/> Needlestick <input checked="" type="checkbox"/> Open cut <input type="checkbox"/> Bite <input type="checkbox"/> Puncture <input type="checkbox"/> Mouth <input type="checkbox"/> Eye <input type="checkbox"/> Other: _____		
Exposure Type: <input checked="" type="checkbox"/> Blood <input type="checkbox"/> Sputum <input type="checkbox"/> Saliva <input type="checkbox"/> Other: _____			
Precautions: <input type="checkbox"/> Mask <input type="checkbox"/> Eye Wear <input type="checkbox"/> Gown <input type="checkbox"/> Exam gloves <input type="checkbox"/> Gloves <input type="checkbox"/> Other: _____ (latex, nitrile, vinyl)                      (work type)			
Cleaning <input type="checkbox"/> Hand Washing <input checked="" type="checkbox"/> Washing Contaminated Skin <input type="checkbox"/> Other: _____			

Describe the nature of the unprotected exposure *in detail: (attach additional pages if needed)*

*Suspect bleeding from mouth and head after being taken down while trying to escape. Received a cut on my arm when I fell on the pavement taking down the suspect. While wrestling with suspect, blood from his wounds got onto my open wound.*

Describe the steps taken by the rescuer to minimize the exposure:

Washed wound immediately with soap and water and reported incident to my supervisor.

I understand that in the case of certain exposures (e.g. needlestick with a bloody needle) it is crucial for the exposed rescuer to seek immediate medical evaluation for treatment that might reduce the risk of infection. Completion of the Unprotected Exposure Form may be done during or after the medical evaluation.

I further understand that I will be informed of an unprotected exposure, only if the patient is diagnosed as having a bloodborne infectious disease dangerous to the public health, as defined in 105 CMR 172.001 and if, in the view of medical personnel, my documented exposure is capable of transmitting that disease.

Rescuer's Signature: Harry Callahan Date: 10 July 2003

Form Received By: Major Margaret Houlihan Date: 10 July 2003

Rev. 11/06/2000

(Side 1 of 2)

*(Instructions and Information on Reverse)*

**( COPY BOTH SIDES! )**

**Massachusetts Department of Public Health**

**Unprotected Exposure Form**

An Unprotected Exposure Form should be completed for any prehospital emergency care worker (e. g. an EMT, firefighter, police officer, or corrections officer) who believes he/she may have had an unprotected exposure to a patient's blood or ***other contaminated*** body fluid(s) in the course of attending, assisting or

transporting a person to a health care facility as part of his/her professional duties. It is the responsibility of each care provider to complete and file a form with the receiving facility.

If you believe you may have had an unprotected exposure, ***you should seek immediate medical evaluation for possible prophylactic immunization and/or treatment, as indicated.*** You must provide the information on this form to the facility, which received the patient ***from whom you received the exposure.*** Ambulance ***personnel*** or other emergency care providers having an unprotected exposure must complete a form on arrival and leave it at the health care facility with the patient. Other individuals shall file their own forms with the receiving facility within 24 hours of the unprotected exposure.

The health care facility will review the information, which you provide and will determine if you have sustained an unprotected exposure as defined in DPH regulations. If the patient to whom you were exposed is diagnosed as having a bloodborne infectious disease dangerous to the public health, and if you sustained an unprotected exposure which, in the opinion of the health care facility, is capable of transmitting such a disease, the facility shall provide oral notification within forty-eight (48) hours of the diagnosis and written notification within seventy-two (72) hours of the diagnosis. This notice shall be given to the designated infection control officer for your agency who ***must*** be listed on the unprotected exposure form. Upon notification, the designated infection control officer shall notify you. The notice shall include the appropriate precautions and actions which you should take, the identity of the disease to which you were exposed, necessary precautions to prevent the transmission of the disease to others, and instructions to contact a physician for medical follow-up. **NOTE: The health care facility's determination that you have had an unprotected exposure does NOT necessarily indicate that you have contracted an infectious disease.** The report from the health care facility to the designated infection control officer to you is confidential and is governed by M.G. L. c.111, §111C and DPH regulations 105 CMR 170.000, 171.000 and 172.000.

***N.B. – Due to the time it may take to diagnose a patient with an infectious disease, or the possibility that a patient may never be diagnosed, and the time it may take to notify you of the exposure, the Department recommends that anyone who believes they have suffered an unprotected exposure, such as a needlestick with a bloody needle, should see a physician immediately. Certain prophylactic regimens should be started within hours of an unprotected exposure.***

## **INSTRUCTIONS:**

PLEASE PRINT CLEARLY

- ◆ Complete all information on the form.
- ◆ In the **shaded areas**, check all boxes that apply:
  - ☐ the exposure route to you of a patient's blood or bodily fluid(s).
  - ☐ the type of the patient's bodily fluid(s) to which you were exposed.

☐ **body substance isolation** precautions you used (even if they were breached).

☐ post incident cleaning you performed.

☐ if you checked any "Other" box(es), explain in the space(s) **provided**.

◆ In the blank **narrative** sections explain fully the exposure and any treatment you have obtained. Use additional blank sheets, if necessary, and staple **them** to the form. The more accurately you explain the circumstances, the easier it will be for the facility personnel to evaluate your exposure.

◆ EMT's must also leave a copy of the ambulance trip record at the receiving facility.

◆ Each EMT and other prehospital emergency medical health care **providers who have** sustained an unprotected exposure must file his/her own form. The form(s) shall be submitted to the receiving health care facility upon patient arrival or within 24 hours.

◆ Transportation or treatment of the patient(s) must not be delayed in order to complete the form(s).

◆ ***Make a copy for your own records and/or for your designated infection control officer, in accordance with your employer's policies and procedures.***

***DO NOT SEND THE ORIGINAL FORM OR A COPY TO THE DEPARTMENT OF  
PUBLIC HEALTH!***

*(Side 2 of 2)*

*11/6/2000*